Business and Finance Technology Education Frameworks
2009
Computer Information Systems

Content Standard 1 – Impact on Society Develop a mastery of technology tools required to enhance academic, business, and personal performance for success.			
The student will be able to:	**Beginning**	**Intermediate**	**Advanced**
Strand 1 Assess the impact of information technology in a global society.	**Learner Expectation** Identify uses of information technology that meets human needs and affects quality of life in the home, school, and work. Use information technology skills for lifelong learning.	**Learner Expectation** *Describe the impact of technology on the knowledge and skills needed for success in the workplace. Evaluate how information technology transforms business processes and relationships.	**Learner Expectation** Analyze how developments in information technology affect the supply/demand characteristics of the global job market. Illustrate how information technology changes organization structures.

Content Standard 2 - Hardware Describe current and emerging hardware; configure, install, and upgrade; diagnose; and repair.			
The student will be able to:	**Beginning**	**Intermediate**	**Advanced**
Strand 1 Identify hardware components appropriate for specific tasks.	*Identify the purpose and care of all types of computers and components. Identify, connect, and explain the operation of peripheral devices.	Explain and evaluate the purpose and care of computer components including capabilities for specific tasks. Evaluate hardware device options including vendors and warranties to make sound consumer decisions. Compare and contrast various storage options (e.g., local, removable, remote). *Identify examples of emerging hardware technologies. Obtain hardware certification(s) needed for a chosen career path.	Evaluate and recommend hardware to solve specific problems. Analyze cost benefits and life cycle of hardware.

Content Standard 3 – Operating Systems and Utilities Identify and evaluate various types of operating systems and utilities.			
The student will be able to:	**Beginning**	**Intermediate**	**Advanced**
Strand 1 **Describe various types of operating systems and utilities.**	Navigate operating systems. *Manage folders and files. *Identify and use appropriate help resources (e.g., help desks, online help, manuals) to install, configure, upgrade, diagnose, and repair operating systems and utilities	Compare and contrast the functions, features, and limitations of different operating systems and utilities (e.g., open source, mobile, and proprietary operating systems) Install and customize operating systems and utilities Obtain operating system certifications(s) needed for chosen career path.	Install and customize operating systems and utilities. Diagnose and repair installation and operational problems of operating systems and utilities.

Content Standard 4 - Input Technologies Develop proper input techniques.			
The student will be able to:	**Beginning**	**Intermediate**	**Advanced**
Use various input technologies to enter and manipulate information appropriately.	Use input technology skills to enter and manipulate text and data.	*Develop proper input techniques (e.g., 10-key touch pad, scanning, digital cameras, and recognition of developing technologies, the use of a touch screen mouse or stylus, speech recognition, student response systems, digital inking, and any new emerging technology) *Use a variety of input technologies to maximize productivity. Compose and integrate documents using a variety of input technologies.	Explore translation and digital language input tools and resources for effective global communication.

Content Standard 5 - Productivity Software Use emerging application software appropriate for specific tasks.			
The student will be able to:	**Beginning**	**Intermediate**	**Advanced**
Identify, evaluate, select, install, use, upgrade, and customize productivity software; diagnose and solve software problems.	*Create and present multi-media using word processing and presentation software. Create projects collaboratively	*Use word processing, desktop publishing, database, spreadsheet, presentation, and multimedia software to improve academic achievement across the curriculum. Select and apply the appropriate productivity software to complete tasks. Use help features and reference materials to learn software and solve problems. *Design, create, and publish pages incorporating multi-media using various on-line template resources. Identify terminology and structure for database development to sort and extract information. *Create and utilize multimedia delivery tools (e.g., blogs, podcasting, webcasting). Obtain software industry certifications(s) needed for a chosen career path. *Design, develop, and deliver advanced web content and applications using web design programs.	Use advanced word processing, desktop publishing, database, spreadsheet, presentation, and multimedia software features for professional applications. Obtain software industry certifications(s) needed for a chosen career path. Analyze cost benefit and life cycle of software. Design, develop, and deliver advanced web content and applications using web design programs. Plan and develop a database schema that explores industry standards for cross-platform interface development.

Content Standard 6 - Programming and application development Design, develop, test, and implement programs.			
The student will be able to:	**Beginning**	**Intermediate**	**Advanced**
Strand 1 Demonstrate the ability to code.	*Identify and explain programming structures.	Choose the appropriate language or application development tool for specific tasks. *Apply design principles to programming tasks. Test, debug, and document code.	Maintain and reengineer existing code Create a project to solve a business problem integrating mobile platforms. Obtain programming industry certification(s) needed for chosen career path

Content Standard 7 - Networking, Infrastructure, and Security Develop skills for networking and security.			
The student will be able to:	**Beginning**	**Intermediate**	**Advanced**
Strand 1 Develop skills to design, deploy, and administer networking and security procedures for IT.	Identify and use basic networking resources.	*Identify network devices, including connectivity hardware, and describe their functions. *Distinguish among network environments (e.g., peer-to-peer, client server, thin client, n-tier, Internetworks, intranets, extranets). Compare and contrast the OSI model with protocols (e.g. TCP/IP, IPX/SPX) Apply path determination, routing, and addressing schemes to administer networks. Install and configure routers to simulate a LAN/WAN environment.	Design hardware and software network security solutions(e.g. VPN, SSL, Firewall) Obtain the networking industry certification needed in a chosen career path.
The student will be able to:	**Beginning**	**Intermediate**	**Advanced**
Strand 2 Explain the risks and dangers of sharing personal information.	Adhere to privacy, safety and security policies and legislation. *Identify and discuss privacy issues within an organization.	*Implement the procedures used to recover information from failures and security breaches. *Implement controls to prevent loss of integrity of data and other information resources.	Design and implement a security plan for an information system. Develop and implement disaster prevention and recovery policies and procedures.